











**Burnsville Raingardens**  
Designed by: Barr Engineering  
Photo by Mike Isensee, Dakota SWCD



## Before and After



**Burnsville Raingardens**  
Designed by: Barr Engineering



## Before and After



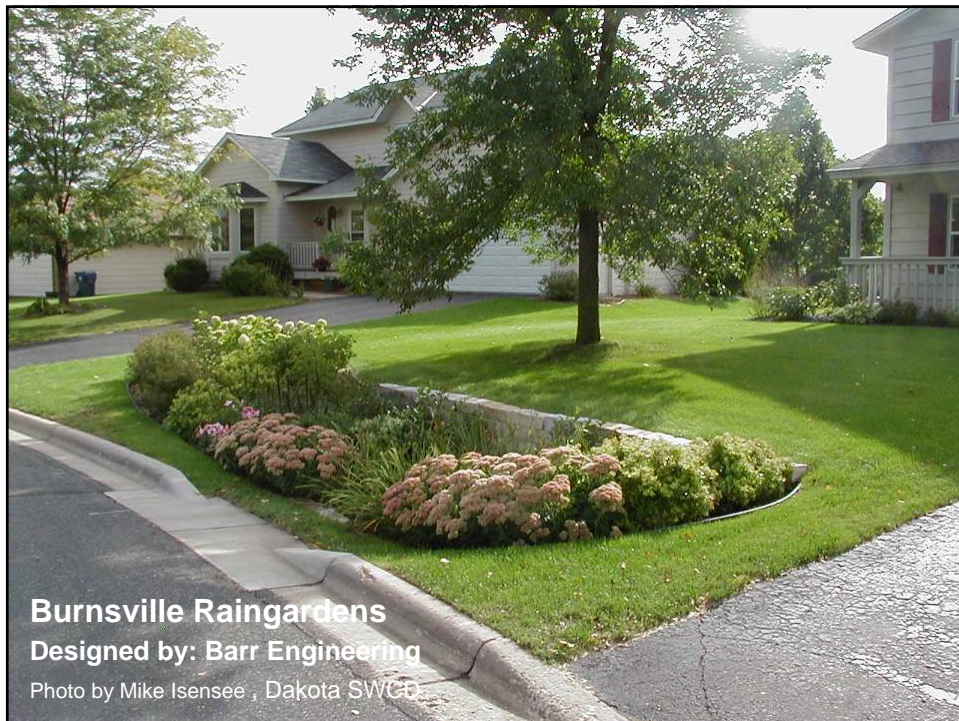
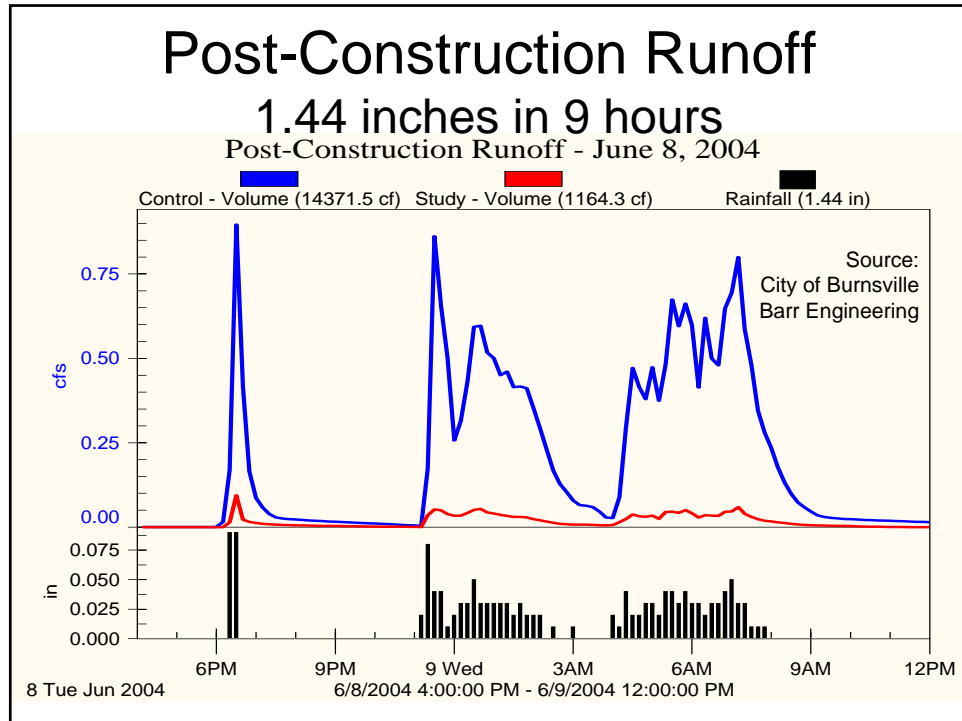
**Burnsville Raingardens**  
Designed by: Barr Engineering  
8.2.2004



5.3 acres – 25 homes – 17 raingardens

**Burnsville Raingardens**  
Designed by: Barr Engineering









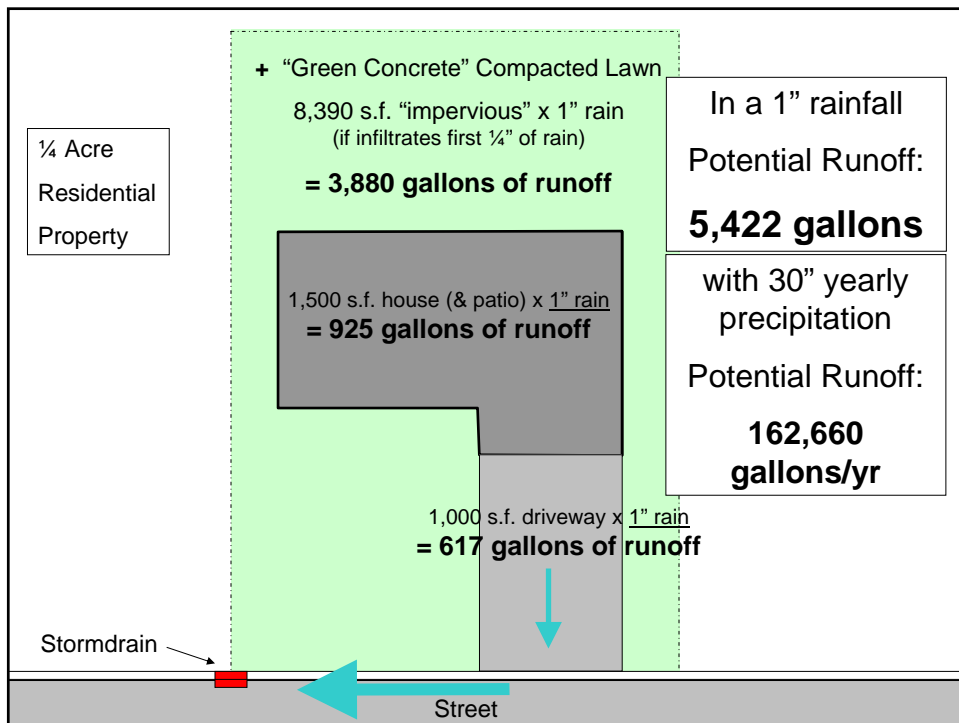
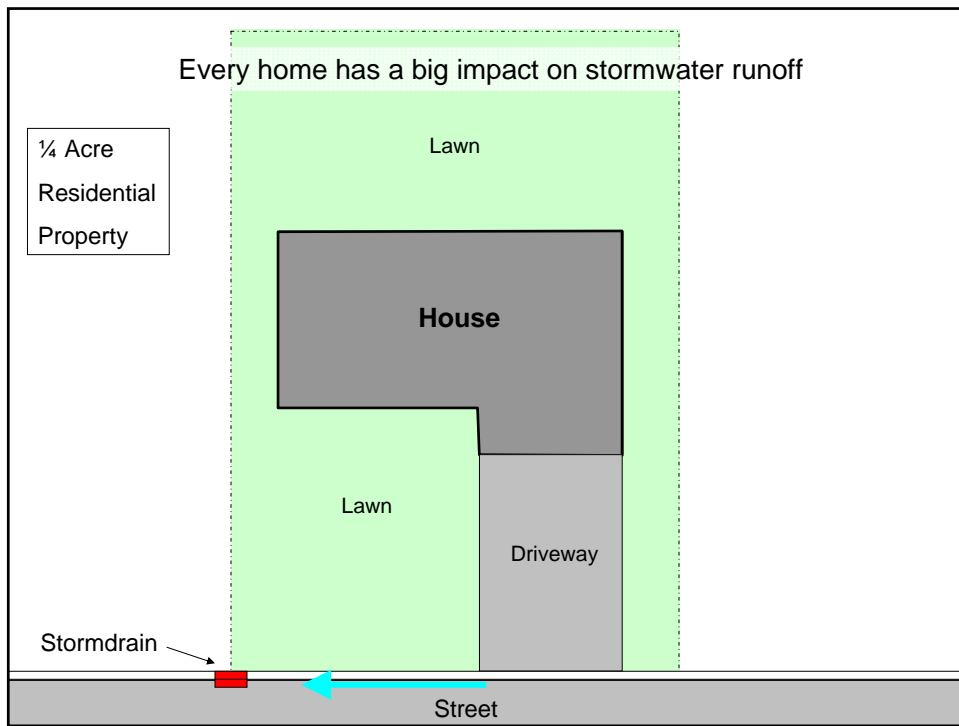






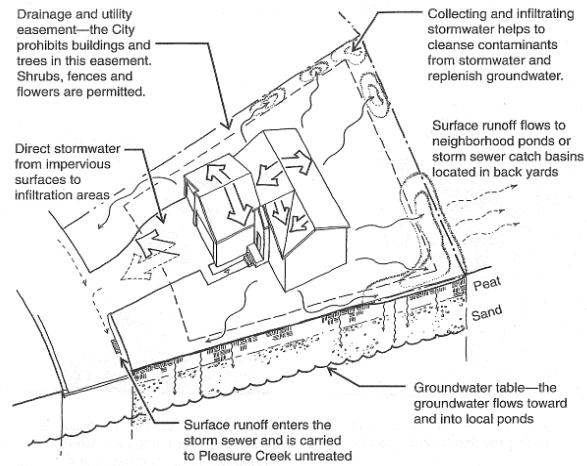








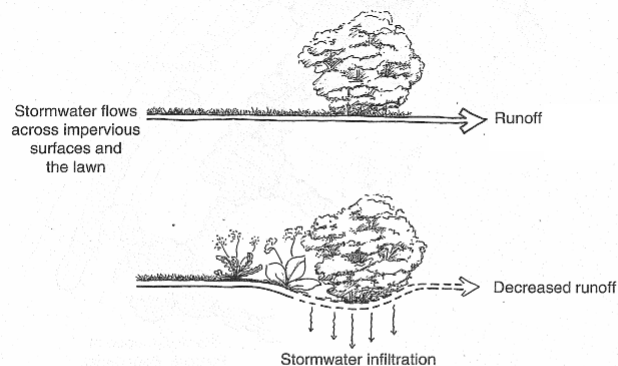
## Rainwater-Absorbing Landscaping



U of M CALA /  
City of Blaine

This diagram shows the movement of stormwater as it travels away from your house. Responsible stormwater management includes directing this water away from your house to ensure a dry basement yet allowing for infiltration within the yard. A good place to capture water is the "drainage and utility easement" at the edges of your property. Here water can be directed to the back and front of the lot and allowed to soak into the ground.

Raingardens can be simple depressions integrated into your landscaping.



Small depressions created to collect stormwater can be planted with trees and shrubs. Plants such as red twigged dogwood, American hazelnut, and black chokeberry will benefit from the additional moisture.

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City of Blaine



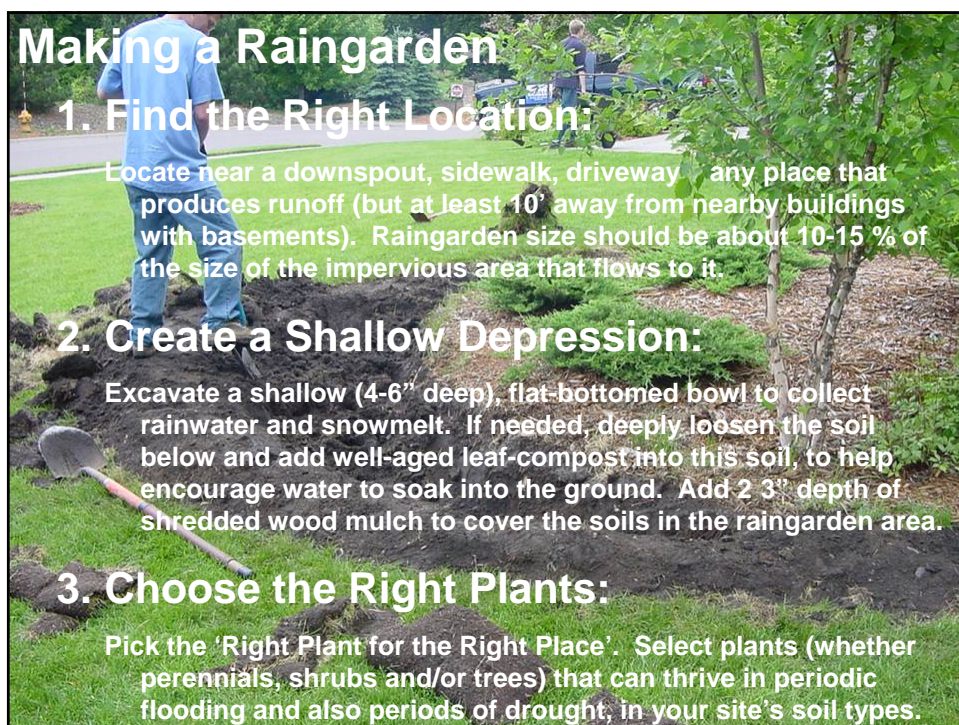














A shallow depression planted with native wetland or wet prairie wildflowers and grasses.

# Benefits Rain Garden

- Keeps pollutants and excess nutrients out of lakes and streams by collecting and filtering stormwater runoff.
- With proper soil amendment, helps prevent flooding by reducing runoff.
- Deep-rooted native plants allow rainwater to soak into the ground to benefit plants and help restore groundwater.
- Diversity of plant species increases resistance to impacts of drought, flood, insects, and disease.
- Attracts birds, butterflies and beneficial insects such as dragonflies, which eat mosquitoes.
- Enhances the beauty of yards and communities.
- End of season leaves, stalks and seed heads provide winter interest and beauty.

**LOW MAINTENANCE**

- Water only during the first year while plants establish deep root systems.
- Weed regularly for the first three years—minimal weeding thereafter.
- No fertilizer or pesticide application needed.
- Mow or cut dead vegetation once each spring when new growth is less than a foot tall.

Water should not remain in a rain garden for longer than 48 hours after the rain stops. A properly designed rain garden will not increase mosquito populations because mosquitoes cannot complete their life cycle within 48 hours.

The Eco-Yard Midtown rain garden is larger and deeper than a homeowners would typically install. The basic construction of a rain garden is illustrated below.

This rain garden was planted with plugs—very small plants—using 17 species of wildflowers and 10 species of grasses to provide a rich diversity of size, shape, texture, color, and bloom time.

*Eupatorium maculatum*  
Spotted Joe Pye Weed

*Hakonekikyo*  
False Anemone

Learn more about the Eco-Yard Midtown and sustainable landscaping at [www.hennepin.us](http://www.hennepin.us). May Wood youth Eco-Yard

## RAIN GARDENS FOR LANDSCAPES

### LANDSCAPING WITH WATER-QUALITY IN MIND

**What is a Rain Garden?**

Rain gardens are strategically-placed shallow depressions that capture stormwater runoff from hard-surface areas such as parking lots, roofs and driveways, and help water soak into the ground.

Rain gardens reduce the amount of stormwater and pollutants that flow into nearby wetlands, lakes, streams and rivers. Reducing and filtering stormwater runoff helps improve water quality.

**How do Rain Gardens Work?**

Rain gardens provide for the natural infiltration of rainwater into the soil. This helps to filter out pollutants including fertilizer, pesticides, oil, heavy metals, gasoline and other chemicals that are carried with the rainwater that washes off your lawn, rooftop, and driveway.

The plants, mulch and soil in a rain garden combine physical, biological and chemical processes to remove pollutants from runoff. Many pollutants will be filtered out and break down in the soil over time.

Water should stand in a rain garden no longer than 24 hours after the rain stops. Mosquito eggs need about one week of standing water to hatch. Rain gardens are designed to drain-down quickly.

**How to Make Your Own Rain Garden:**

- Find the Right Location:**  
Locate your rain garden near a downspout, sidewalk, driveway—any place that produces a lot of runoff and is at least 10 feet away from nearby buildings with basements. A rain garden should be about 10-15% of the size of the hard-surface drainage area that flows to it.
- Create a Shallow Depression:**  
Excavate a shallow (4-6" deep), flat-bottomed bowl to collect rainwater and snowmelt. If needed, deeply loosen the soil below and add well-aged leaf-compost into this soil, to help encourage water to soak into the ground. Add 2-3" depth of shredded wood mulch to cover the soils in the rain garden area.
- Choose the Right Plants:**  
Pick the 'Right Plant for the Right Place'. Select plants (whether perennials, shrubs and/or trees) that can thrive in periodic flooding and also periods of drought.

**This rain garden was created in May 2007 by:**


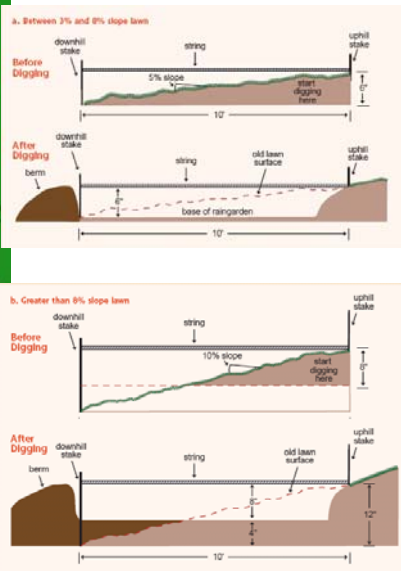
Scott Soil and Water Conservation District  
USDA—Natural Resources Conservation Service  
Scott Watershed Management Organization  
Scott County Master Gardeners

Educational Signage  
Available from Gregg or Shawn  
Created in Microsoft Publisher



# RAIN GARDENS

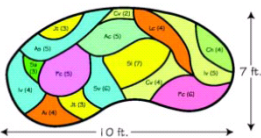
A how-to manual for homeowners

**Wisconsin DNR & UWEX  
- Raingarden 'How-To' Manual**

10 feet wide; full to partial shade with clay soils

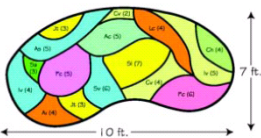
Total Area: 70 sq. ft.



Symbol	Species Name	Common Name	No. of Plants
Ac	<i>Asclepias tuberosa</i>	Sweet flag	12
Ca	<i>Campanula americana</i>	Tall bellflower	6
Ca	<i>Calla palustris</i>	Marsh marigold	7
Ca	<i>Carex Grayi</i>	Bur sedge	3
Ca	<i>Carex lupulina</i>	Hop sedge	3
Ca	<i>Carex stricta</i>	Wild blue flag iris	13
Ca	<i>Lobelia cardinalis</i>	Cardinal flower	7
Ca	<i>Mentha virginica</i>	Virginia bluebell	12
Ca	<i>Oenothera biennis</i>	Sensative fern	3
Total Plants Needed			70

10 feet wide; full to partial sun with clay soils

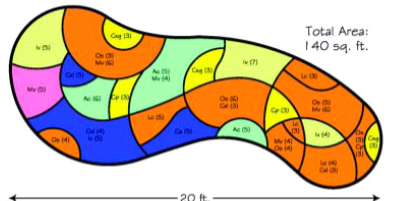
Total Area: 70 sq. ft.



Symbol	Species Name	Common Name	No. of Plants
Ac	<i>Asclepias tuberosa</i>	Sweet flag	5
Ac	<i>Asclepias syriaca</i>	Swamp milkweed	4
Ac	<i>Asplenium platyneuron</i>	Water plantain	5
Ca	<i>Carex Grayi</i>	Bur sedge	4
Ca	<i>Carex stricta</i>	Hop sedge	4
Ca	<i>Carex lupulina</i>	Wild blue flag iris	3
Ca	<i>Carex lasiocarpa</i>	Tommy's rush	4
Ca	<i>Lobelia cardinalis</i>	Cardinal flower	4
Ca	<i>Portulaca oleraceus</i>	Pinkish weed	1
Ca	<i>Sagittaria arifolia</i>	Arrowhead	7
Ca	<i>Sorbus alba</i>	Green hollyhock	3
Ca	<i>Sorbus alba</i>	Soft-stemmed hollyhock	6
Total Plants Needed			70

20 feet wide; full to partial shade with clay soils

Total Area: 140 sq. ft.



Symbol	Species Name	Common Name	No. of Plants
Ac	<i>Asclepias tuberosa</i>	Sweet flag	16
Ca	<i>Calla palustris</i>	Marsh marigold	9
Ca	<i>Campanula americana</i>	Tall bellflower	5
Ca	<i>Carex Grayi</i>	Bur sedge	9
Ca	<i>Carex lupulina</i>	Hop sedge	15
Ca	<i>Carex stricta</i>	Wild blue flag iris	21
Ca	<i>Lobelia cardinalis</i>	Cardinal flower	15
Ca	<i>Mentha virginica</i>	Virginia bluebell	25
Ca	<i>Oenothera biennis</i>	Sensative fern	25
Total Plants Needed			140

**Wisconsin DNR & UWEX  
- Raingarden 'How-To' Manual**

## Raingarden Plant Kits

We have raingarden plant kits for the do-it-yourselfer

**\$199**

- ◆ Designed to cover 100 sq ft.
- ◆ Includes at least 7 Minnesota native plant species (species will vary according to site specifics)
- ◆ Includes 36, 4" container plants & 32, 3" container plants
- ◆ Easy to follow design example included

Call us at  
612-703-7581

Natural Shore  
Technologies, Inc.  
[www.naturalshore.com](http://www.naturalshore.com)  
6275 Pagenkopf Rd  
Maple Plain, MN 55359



Plant Supplier / Consultant:  
Natural Shore Technologies

### Raingarden Planting Plans

Available from  
[www.ci.maplewood.mn.us](http://www.ci.maplewood.mn.us)

Search for "raingarden"

- 1** Blue flag iris  
(Iris versicolor)  
Height: 2 feet  
Space: 1 foot  
Blooms: May - June



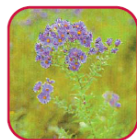
- 2** Yarrow  
(Achillea millefolium)  
Height: 1-2 feet  
Space: 1 foot  
Blooms: May to frost



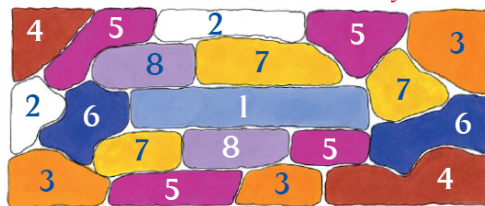
- 3** Black-eyed susan  
(Rudbeckia hirta)  
Height: 1-2 feet  
Space: 1 foot  
Blooms: May to frost



- 8** New England Aster  
(Aster novae-Angliae)  
Height: 4-5 feet  
Space: 2 feet  
Blooms: Midsummer to frost



### Minnesota Prairie Garden Layout



- 4** Little bluestem  
(Schizachyrium scoparium)  
Height: 2-4 feet  
Space: 18 inches  
Blooms: May to frost



- 7** Oxeye sunflower  
(Helianthus helianthoides)  
Height: 3-5 feet  
Space: 30 inches  
Blooms: All summer



- 6** Blue verain  
(Verbena hastata)  
Height: 3 feet  
Space: 2 feet  
Blooms: June to frost



- 5** Purple coneflower  
(Echinacea purpurea)  
Height: 3 feet  
Space: 2 feet  
Blooms: June to frost





